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The Causes of Insolvency

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THE CAUSES OF INSOLVENCY:

An Analysis of Canadian and American Incidents of Insolvency

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A background paper prepared for
The Ontario Task Force on Financial Institutions

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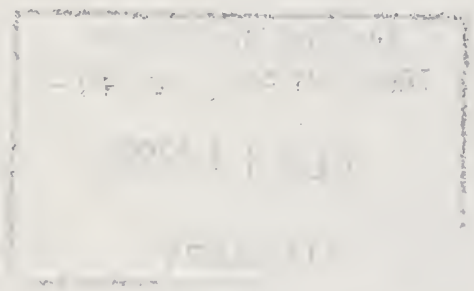

I. INTRODUCTION

The failure of an unprecedented number of significant Canadian and U.S. financial institutions since the severe economic downturn in 1982 has resulted in a renewed emphasis on the part of policy-makers, regulators and academics on the stability or soundness of the financial system as a paramount goal of financial regulation. The objective of this paper is to consider the causes of insolvency or failure of financial institutions as opposed to an emphasis on the regulatory and administrative actions taken in response to insolvencies. We hope that the information disclosed in this paper will prove useful as a guide to proactive regulation.

The paper is divided into three principal parts. Part II considers the justification for the special regulation of financial institutions. Particular emphasis is placed on the justifications of consumer protection, ensured stability of the financial system, the precariousness of the highly levered nature of financial institutions' balance sheets and protection against self-dealing. In Part III we report the results of our research and consideration in respect of the causes of failure of loan and trust companies and property and casualty insurance companies in Canada since 1981. Our research in this regard should be considered as a departure point for an ongoing research effort due to the paucity of literature on Canadian failures. In the United States there is a significant body of recent literature which has attempted to determine the causes of the increase in deposit-taking financial institution failures. This literature, much of which features research techniques and methodologies of interest to further Canadian studies in this area, is reviewed in Part IV of this paper.

II. RATIONALE FOR REGULATION

A. Introduction

In a legal sense, solvency usually is defined in two ways: (i) the ability to meet obligations as they come due; and (ii) having assets in excess of all liabilities. The determination of the point of actual insolvency for a financial institution is an extremely difficult exercise and this traditional legal definition provides very little practical guidance.[1] However, the definition does reflect the two fundamental concerns of regulators of financial institutions, namely, liquidity and soundness. Regulators monitor the operations of financial institutions to ensure that the institutions maintain adequate liquidity to honour

all demands for, and maturations of, deposit and other liabilities. Regulators also act to ensure that financial institutions remain "sound" in the sense of maintaining an adequate net worth.

The regulation of financial institutions differs from that of ordinary industrial corporations where most regulation is directed at ensuring that there is full disclosure of relevant information. Federal and provincial governments have determined that financial institutions require specific regulation to ensure their soundness and liquidity. Before embarking on an attempt to catalogue the causes of the recent failures or near failures of Canadian and U.S. financial institutions, a broader issue should be examined. The rationale for special regulation of financial institutions vis-a-vis industrial corporations should be analyzed to determine if that special regulation is warranted. If there is no need to adopt specific measures which help ensure the liquidity and soundness of financial institutions, concern over recent insolvencies is diminished. Similar to the situation of industrial corporations, these insolvencies should be accepted as part of the normal weeding out process of Canada's competitive economic structure.

In examining the rationale for special regulation of financial institutions, we are not focussing on causal or historical explanations, such as the ways in which past scandals, failures or government inquiries have resulted in changes to regulation. We are restricting our analysis to the theoretical plane, examining the justification for the special regulation of financial institutions, not the explanation of why it exists.[2] We examine several possible justifications for special regulation, with particular emphasis on the justifications of consumer protection, ensured stability of the financial system, the precariousness of the highly levered nature of financial institutions' balance sheets, and protection against self-dealing.

B. Consumer Protection

The suppliers of capital (debtholders and shareholders) always bear the brunt of the failure of any business concern. With ordinary industrial corporations, no special protection against insolvency exists for these suppliers of capital. The position of depositors in

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financial institutions is similar to that of unsecured creditors of industrial corporations. Though depositors have a claim to assets which ranks prior to the claim of shareholders, the safety of a depositor's claim in the absence of deposit insurance depends on the maintenance of solvency by the financial institution.

There are several consumer protection concerns which justify solvency protection for depositors in financial institutions which exceeds that given to suppliers of capital to non-financial institutions. These consumer protection concerns mostly evolve from a consideration of the unique situation of small depositors. For example, virtually all members of the public have deposits with financial intermediaries. This differs from the situation of non-financial corporations where share and debt ownership tends to be concentrated among the more affluent and sophisticated members of the general public who are better able to protect their own interests.

The deposits held by individuals with financial institutions often comprise a significant component of their life savings. Any loss of these savings would be devastating to the individuals concerned. Losses by smaller depositors have a greater disutility for them than losses by wealthier, more sophisticated depositors who usually have the financial wherewithal and adequate investment diversification to withstand the shock of a failure by a financial institution.

The market norm when dealing with non-financial institutions is that investors are left to fend for themselves in the investment marketplace by relying solely on full disclosure of information material to the merits of an investment. Reliance exclusively on disclosure for deposits with financial institutions is inappropriate for smaller depositors because those depositors usually lack adequate sophistication and analytical skills to determine the merits and riskiness of investment alternatives. Even for those who possess those skills, the cost of obtaining and assessing meaningful information regarding investment alternatives is often excessive relative to the amount of funds which is being, or has been, invested.

C. Ensuring the Stability of the Financial System

The financial system occupies a central place in the Canadian economy because it allocates credit within the system and provides a convenient payments system for

consumers and commercial enterprise. The vibrancy of any economy depends, in large part, on the efficiency with which the financial system transfers the excess funds of net savers to net spenders. The efficacy of the economy also depends on having a payments mechanism by which transactions between parties may be settled expeditiously. Unless market and financial intermediaries perform these functions competently, the productivity and growth of the Canadian economy will suffer and Canadians will be discouraged from saving.

Public confidence in the stability and efficacy of the Canadian financial system is essential. A disruption of public confidence might cause the large scale withdrawal of funds from financial institutions, resulting in a retraction of the Canadian money supply and the economy. Governments must always be wary of the repercussions that the failure of an individual institution may have on the financial system as a whole. This point is well illustrated by the domino effect that the failure of Home State Savings and Loan had on other savings and loan associations in the State of Ohio in early 1985. Canadian evidence is provided by the reports of the liquidity crises which occurred at the Continental Bank of Canada, The Mercantile Bank of Canada and the Morguard Bank of Canada because of the solvency problems of the Canadian Commercial Bank and the Northland Bank in the late summer and fall of 1985.

D. The Highly Levered Balance Sheets of Financial Institutions

Among ordinary industrial corporations, any deterioration of a debt/equity ratio to worse than a one-to-one level often is regarded as reflecting significant risk-taking by those corporations. Financial institutions, whose profits flow from the spread earned between the cost of deposit liabilities and the return on assets, tend to have high leverage ratios, sometimes in excess of 20:1.

As with non-financial corporations, it is the equity holders of financial institutions who ordinarily have control of the mechanisms of corporate governance. The highly levered interest of these equity holders creates a tremendous incentive for risk-taking. If a financial institution earns extraordinary returns, those benefits will be realized by the equity holders, not by deposit holders who have fixed claims. If a financial institution fails, the

potential losses of deposit holders vastly exceed the equity holders' losses. This asymmetry creates a tremendous incentive for risk-taking by the equity holders of a financial institution.

In an environment without deposit insurance, market forces would exert some control on excessive risk-taking because depositors would either refuse to place deposits with high risk institutions or demand to be compensated with an adequate risk premium. However, the existence of deposit insurance and the tendency of governments to bail out even uninsured depositors have sharply reduced this market discipline. Depositors have little incentive to monitor the risk profile of the assets of a financial institution.

These incentives for risk-taking, particularly in light of the distortions to market discipline caused by deposit insurance and government bail-outs, justify intervention by regulators to prevent excessive risk-taking at the expense of depositors.

The usual regulatory response designed to control the risk associated with non-financial corporations is mandatory disclosure which allows prospective investors to gauge the riskiness of their investments. Even ignoring any distortions caused by the existence of deposit insurance, market control through disclosure is inappropriate for financial institutions because reliance on disclosure requires complete and meaningful disclosure. The complexity and diversity of financial institutions' assets make full disclosure difficult for the following reasons:

(i) There is a high degree of subjectivity in assessing the value of assets. For example, there is a wide range of possible values when an attempt is made to determine the fair market value of real estate securing the payment of a loan.

(ii) Disclosure relies upon accounting concepts which inherently involve a high degree of subjectivity. For example, the determination of loan loss reserves is an imprecise art which leaves management with broad discretion.

(iii) Current levels of disclosure do not provide complete information. For example, there was tremendous confusion over the risk profile of Canadian banks when concerns were raised about the sovereign debt of Third World countries. No meaningful public disclosure had been made, nor was it mandated, about the exposure of the various banks.

It addition, disclosure is not an adequate solution to the problem of risk assessment because there is always a time lag associated with it. The time lag problem is especially significant for financial institutions. Unlike non-financial corporations, financial institutions are unique in the sense that they are able to change abruptly the risk level of their assets by selling parts of their then current asset portfolio in secondary markets and investing in riskier assets. There is no requirement that depositors receive timely notice of these activities either before or after their completion.

E. Protection Against Self-Dealing

As our analysis of the U.S. literature and the Canadian experience reveal later in this paper, insider misconduct has been a factor in several financial institution failures. U.S. data, though somewhat dated, show that the rate of failure due to insider misconduct is higher for financial institutions than for non-financial corporations.[3] An incentive exists for real goods corporations to acquire financial institutions because of the potential benefits of a self-financing ring, i.e., the funds of depositors held with financial institutions may be used by the dominant shareholder to finance its activities in the real goods sector. Since insider misconduct, if undisclosed as is often the case, prevents depositors from knowing fully the risks posed by a firm, markets will not work perfectly and there is a need for special solvency regulation controlling self-dealing.

F. Conclusion

Several rationales exist for special regulation of financial institutions aimed at ensuring their solvency. Small, unsophisticated depositors need consumer protection measures. The integral role played by financial

institutions in the Canadian economy demands that the stability of the financial system be preserved through the maintenance of public confidence. The incentives for risk-taking by financial institutions cannot be controlled adequately by the usual mechanism of disclosure and finally, financial institutions seem particularly prone to insider misconduct. These rationales combine to justify the special regulation of financial institutions to ensure their soundness and liquidity.

III. THE FAILURE OF LOAN AND TRUST COMPANIES AND PROPERTY AND CASUALTY INSURANCE COMPANIES: THE CANADIAN EXPERIENCE SINCE 1981

A. Introduction

In its Interim Report the Task Force identifies two primary goals for the Canadian financial system: solvency and an efficient capital market.[4] Professor James Pesando's review of the Interim Report characterizes solvency and "the related issue of public confidence in the financial system" as the "central concern" of the Interim Report.[5] The Task Force, of course, has not been alone in stressing the importance of solvency as a central goal of financial regulation in Canada. In its Green Paper, The Regulation of Canadian Financial Institutions: Proposals for Discussion, the federal government observes that "solvency has historically been, and continues to be, the prime regulatory issue".[6] Mr. John Sargent, Assistant Deputy Minister, Financial Sector, Policy Branch, Department of Finance, in testimony before the Standing Committee of the House of Commons on Finance, Trade and Economic Affairs in July, 1985, indicated that he believes that an emphasis on solvency and stability as public policy objectives is one which properly commands very wide support.[7] Similar views have been expressed recently in the United States. The Final Report of the Task Group on Regulation of Financial Services (chaired by Vice President Bush) states that there is no question that the stability of the financial system is a paramount goal of financial regulation.[8]

Primarily because of their low level, financial institution failures historically have not interested Canadian scholars and analysts. Regulators have tended to emphasize the regulatory and administrative actions taken in response to failures and their impact on the shareholders

and depositors of the failed financial institutions. Interest in the underlying causes of failure has been heightened in recent years by the failure of several Canadian financial institutions. In the United States there is a significant body of recent literature which has attempted to determine the causes of the growth in financial institution failures. A summary of this literature as it concerns commercial bank and thrift institution failures is found in Part IV of this paper. Canadian studies in this area have been fewer in number and much less comprehensive and analytical in scope. The purpose of this part of the paper is to present an overview and analysis of the causes of failure of loan and trust companies and property and casualty insurance companies in Canada since 1981.

B. Methodology

Letters were sent to the federal and provincial regulators responsible for the regulation and supervision of loan and trust companies and property and casualty insurance companies. Many of these letters were followed up by further correspondence and oral discussion. Most regulators expressed a real interest in our work and engaged the resources of their offices in an effort to determine the causes of failure of financial institutions subject to their jurisdiction. While we are grateful for their co-operation in this regard, the nature of the responses to our inquiries suggests that Canadian regulators have devoted much more of their time to consideration of regulatory and administrative actions taken in response to failures than to assessment of the reasons for the failures.[9] One of the most helpful sources in respect of an assessment of the reasons for the failures is the paper prepared by the federal Department of Insurance entitled Background Information Regarding the Failure of Financial Institutions Supervised by the Department of Insurance, dated June 11, 1985, prepared for use by the Standing Committee of the House of Commons on Finance, Trade and Economic Affairs. Yet, even the analysis in this document is much less precise in terms of categorizing causes of failure than are the U.S. studies reviewed in Part IV of this paper. Certain of the responses upon which this paper relies were provided to us on a confidential basis because they reflect the subjective views of regulatory staff members or because they concern matters in respect of which litigation is pending or contemplated.

We also have reviewed the written submissions in response to the Interim Report, the transcripts of the

testimony before the Task Force at its public hearings and before the Standing Committee of the House of Commons on Finance, Trade and Economic Affairs in respect of the Green Paper and other documents, papers prepared for recent seminars and conferences,[10] and have made use of the Task Force's extensive clippings file. It, nevertheless, is to be noted that the primary sources for the data presented below are the responses of the Canadian regulators to our request for information and assistance.

We have analyzed only the failure of loan and trust companies and property/casualty insurers since 1981. The time frame of the study is restricted for three principal reasons. First, there has been a marked increase in the number of failures since 1981 and greater attention on the part of regulators to the causes of failure. Second, the second part of 1981 marked the beginning of a severe economic downturn that put extreme pressures of a new or greatly emphasized nature on many financial institutions. Third, it generally is possible to identify insider malfeasance or other self-dealing as a principal cause of most of the relatively few failures prior to 1981.

Sources differ as to the number of failures since 1981.[11] In part, the difference reflects the time of the analysis; failures have continued with an unfortunate frequency through 1985. The difference also reflects the fact that different analysts have considered different types of institutions. There also is no agreement as to what constitutes a failed institution. This paper considers the failure of fifteen loan and trust companies: District Trust Company, AMIC Mortgage Investment Corporation, Seaway Mortgage Corporation, Seaway Trust Company, Greymac Mortgage Corporation, Greymac Trust Company, Crown Trust Company, The Fidelity Trust Company, Northguard Mortgage Corporation, Pioneer Trust Company, Western Capital Trust Company, Dominion Trust Company, Termguard Savings and Loan Ltd., London Loan Company and Continental Trust Company. We also review the failure of six property and casualty insurance companies: The Strathcona General Insurance Company, Pitts Insurance Company, Cardinal Insurance Company, Northern Union Insurance Company, Ideal Mutual Insurance Company and Northumberland General Insurance Company.

While loan and trust companies and property and casualty insurance companies continue to be characterized by one of the lowest failure rates among all major industries,

the magnitude of the potential problems suggested by the significant increase since 1981 in the failure rate raises concerns about the strength and soundness of these industries. Yet, there are major limitations on our ability to establish with certainty the force and validity of the various explanations that have been given for the recent increase in the number of failures. The evidence suggests that the causes of failure or the variables under study tend to work together. It generally is very difficult to isolate a single cause of failure.

As we note below in Part IV, U.S. empirical studies also have not been able to separate these interdependencies. Our attempt in this paper is to sort out their relative influence and the frequency of their occurrence as contributing factors. The analytical categories we employ for causes of failure are not identical to those found below in Part IV. In some cases, such as managerial weakness in loan portfolio and general asset management, they are much broader in scope. For example, such managerial weakness would include factors found primarily under credit risk in Part IV but also factors found under operational inefficiency and rapid loan portfolio growth in Part IV. These differences are in part a reflection of the much less developed nature of such analysis in Canada. As such, this paper should only be considered as a departure point for an ongoing research effort. We are fortunate however that the less developed nature of such analysis in Canada reflects the fact that the failure rate of Canadian financial institutions has been much lower than the failure rate for their U.S. counterparts.

Since the causes of failure in respect of loan and trust companies are somewhat different from the causes of failure in respect of property and casualty insurance companies, the failures in each industry are considered separately.

C. Loan and Trust Companies

1. Macroeconomic Factors

The 1981-82 economic downturn was the most severe recession Canadians have experienced since the Second World War. Real gross national expenditure ("GNE") fell by 4.2 percent between 1981 and 1982. The unemployment rate rose

from an annual average of 7.5 percent in 1981 to 11.9 percent in 1983. It is also to be noted that the recession was much more severe in Canada than it was in the United States, where real GNE fell by only about 2 percent between 1981 and 1982, and the unemployment rate rose by 2 percentage points.

The relationship between general economic conditions and financial institution failures has been noted by several Canadian analysts. Dr. David Slater, then Chairman of the Economic Council of Canada, observes that Canada's poor economic performance "and two successive recessions in 1980 and 1982 accompanied by high rates of business failure, put excessive pressure on many financial institutions".[12] The Governor of the Bank of Canada suggests that "the primary cause of the difficulties encountered by financial institutions over the past few years has been the adverse economic conditions we have been through".[13] The uneven regional impact of the most recent recession is discussed below in the context of diversification risk.

Many of the pressures on financial institutions resulted from the effects of escalating inflation followed by a sharp disinflationary process. The long period of escalating inflation is associated with suspected exaggerated valuations of real assets, including real estate. The subsequent disinflationary process caused a series of financial difficulties for many businesses and placed severe pressures on those financial institutions with overappraised real estate underlying mortgage transactions. These pressures appear to explain in part the failure at several Ontario and western based loan and trust companies.

2. Microeconomic Factors

(a) Diversification Risk

Diversification risk measures the extent to which concentration of assets and liabilities in specific product lines, industries, locations or with related groups of individuals or companies subject loan and trust companies to greater risk of failure.

(i) Portfolio Concentration by Type (Product Lines or Industries)

Several failed western trust companies were characterized by portfolio concentration in terms of product

lines (i.e., second mortgage lending) or industries (i.e., construction lending). Mr. R. M. Hammond, the federal Superintendent of Insurance, in testimony before the Standing Committee of the House of Commons on Finance, Trade and Economic Affairs in June, 1985 observed that Western Capital Trust maintained 61 percent of its mortgage portfolio in interim construction lending[14], that Northguard Mortgage Corporation held 56 percent of its assets in second mortage loans,[15] and that Pioneer Trust Company maintained 20 percent of its mortgage portfolio in interim construction lending.[16] We have identified portfolio concentration by type as a cause in the failure of seven of the fifteen failed trust and loan companies considered by this paper.

(ii) Portfolio Concentration by Region

Professors James Pesando[17] and Seymour Friedland[18] argue that inadequate diversification by region has been a principal cause in the failure of loan and trust companies. Several recent failures have been the result of excessive portfolio concentration in the western provinces which suffered a particularly sharp and deep economic reversal as a consequence of the 1981 recession. We have identified portfolio concentration by region as a cause in the failure of five of the fifteen failed loan and trust companies considered by this paper. It also is noted that these five failed institutions were identified as having been characterized by excessive portfolio concentration by type.

It often is difficult for a new loan or trust company to achieve a diversified asset portfolio in its early years. This problem is magnified in the case of those new companies with a low capitalization.

(b) Interest Rate Risk

Interest rate changes affect the earnings of financial institutions, including loan and trust companies, whenever the maturity structures of assets and liabilities are mismatched. Professor James Pesando argues that the "major concern" in respect of savings and loan association failures in the United States "is a mismatching of the maturity of the assets and liabilities".[19] In this respect, Pesando concurs with the results of the U.S. studies noted below in Part IV which conclude that the primary cause of

savings and loan association failures has been market conditions combined with mismatched asset and liability portfolios dominated by fixed interest mortgages and interest-sensitive liabilities. Pesando notes that interest rate risk has not been as great a concern in Canada.[20] This view is supported by the federal Superintendent of Insurance who comments that "[b]y and large our trust and loan companies, in so far as matching was concerned, by yield and duration came out of the 1981 recession reasonably well if you look at their performance compared to the savings and loan institutions in the United States".[21] The Superintendent proceeds to observe in respect of the Canadian loan and trust companies that "on a matching basis they have generally done very well".[22] Our research supports this conclusion. Interest rate risk appears to have been a major cause in the failure of only three of the fifteen failed loan and trust companies considered by this paper.

We wish to make two further points in this regard. Certain implications of interest rate risk are recognized for purposes of this paper under portfolio concentration by type, particularly in respect of long-term mortgage lending and investment in real estate, particularly undeveloped real estate. The dangers of a lack of diversification of deposit liabilities are evidenced by the failure of several trust and loan companies subject to excessive interest rate risk in part as a result of an over-reliance on wholesale or brokered deposits.

(c) Self-Dealing (Non-Arm's Length Transactions)

We include a broad range of activities under this analytical heading including the buying and selling of assets between loan and trust companies and their major shareholders (or associated companies), the payment of management fees to parent companies, excessive investment in real estate subsidiaries and other insider malfeasance.

Dr. David Slater, then Chairman of the Economic Council of Canada, has suggested that one-half of the 28 severe difficulties or failures of Canadian financial institutions since 1980 have been due to "fraud and self-dealing by the owners of the companies involved".[23] The Governor of the Bank of Canada observes that "one cannot help but be concerned about the number of instances where the financial problems of the individual institutions that have failed were related to transactions with other business

interests of the owners".[24] As we note below in Part IV, it is not always clear whether self-dealing is the cause of failure or merely a symptom.[25] We have identified self-dealing or non-arm's length transactions as a factor in the failure of eleven of the fifteen failed loan and trust companies considered by this paper. We would caution, however, that the number of companies which have failed principally or exclusively because of self-dealing or non-arm's length transactions is somewhat less.

(d) Managerial Weakness in Loan Portfolio and General Asset Management

This broad analytical category includes the threat of erosion of net worth and profitability arising due to loan losses through default (defined below in Part IV in terms of credit risk), operational inefficiencies in terms of abnormally high non-interest costs and rapid loan portfolio growth and its attendant management problems as noted below in Part IV.[26] It is clear that managerial weakness in loan portfolio and general asset management also manifests itself in excessive portfolio concentration by type and by region. The Standing Committee of the House of Commons on Finance, Trade and Economic Affairs in its Report respecting the circumstances relating to the support package in March, 1985 offered to the Canadian Commercial Bank ("CCB") concludes that the major mistakes made by the management of the CCB derived from their lending strategy and practices including the overconcentration of loans in a few sectors.[27] We have identified managerial weakness in loan portfolio and general asset management as a factor in the failure of all fifteen of the fifteen failed loan and trust companies considered by this paper. Such managerial weakness was in fact a principal cause of failure in a majority of these failures.

D. Property and Casualty Insurance Companies

1. Macroeconomic Factors

Difficult general business conditions resulting in a poor claims record in the property and casualty insurance industry in the context of stiff rate competition among property and casualty insurers appears to have been a factor in the failure of most of the companies which have failed in recent years. Underwriting losses incurred by these

companies have outpaced the investment growth in their asset portfolios.[28]

2. Microeconomic Factors

(a) Inadequate Capital and Surplus

The property and casualty insurance companies that failed generally were small, relatively new and capitalized at a low level. In the face of poor general business conditions and a rising claims level, they were unable to maintain adequate capital or to increase their surplus. Inadequate capital and surplus appears to have been a factor in the failure of at least four of the six failures in the property and casualty insurance industry.

(b) Claims and Other Reserves

There are two main types of reserves held on the balance sheets of property and casualty companies: (a) reserves for claims incurred; and (b) reserves in respect of policies where claims have not been incurred. Claims reserves that ultimately proved inadequate were a factor in the failure of at least two of the six failed companies considered in this paper.

(c) Poor Quality Business and Inadequate Premium Rates

With the possible exception of the Ideal Mutual Insurance Company, the failure of which can be related to its financial difficulties in the United States, the failures in the property and casualty insurance industry are characterized by either a poor quality of underwritten business or inadequate premium rates and often both.

(d) Adequacy of Security Provided by Reinsurance Arrangements

Reinsurers denying liability on claims has been a cause in the failure of at least four of the six failed property and casualty insurance companies considered in this paper.

(e) Interest Rate Risk

Interest rate risk (asset-liability mismatch) appears to have been a major factor in the failure of at

least two of the six failed property and casualty insurance companies considered in this paper.

(f) Other Factors

The financial difficulties of an American company that was registered to transact business in Canada on a branch basis was a factor in the failure of one company. Rapid growth in the U.S. through the U.S. branch of a Canadian company also may have been a factor in the failure of one company.

IV. SUMMARY OF RECENT LITERATURE ON THE CAUSES OF FAILURES OF U.S. DEPOSIT-TAKING INSTITUTIONS

A. Introduction

In recent years, failures of U.S. banks and savings and loan associations ("thrift institutions") have increased to levels unparalleled since the Great Depression years of the 1930's. From 1943 through 1981, there were no more than 17 failed banks in any year and, on average, about six banks failed each year. In 1982 and 1983 alone, there were 90 bank failures and the first 11 months of 1984 saw 73 more. As at October 31, 1984, the Federal Deposit Insurance Corporation ("FDIC") had classified 800 banks as problem banks.[29]

From 1980 through 1984, more than 500 thrift institutions failed. Failures peaked in 1982 when 252 institutions failed. Although the number of failures has declined since 1982, more than 400 thrift institutions had a net worth of zero or less and approximately 850 had a net worth between zero and three percent of their assets as at year end 1984.[30]

The purpose of this part of the paper is to review the results of recent literature which has attempted to determine the causes of this recent spate of financial institution failures in the United States. The focus of this review will be on failures which have occurred in the 1980's.

B. Format

Several variables which may explain the cause of failures by financial institutions have been examined by

various studies, both macroeconomic and microeconomic. After an examination of macroeconomic variables, the summary will review the microeconomic variables by dividing them into nine categories: (1) symptomatic variables; (2) credit risk; (3) interest rate risk; (4) moral hazard risk; (5) diversification risk; (6) liquidity risk; (7) operational inefficiency; (8) rapid growth; and (9) exogenous factors. Whenever possible, the data for banks and thrift institutions have been examined separately.

Not all of the variables examined are causes, some are merely symptomatic of financial institution failures. For instance, it is axiomatic that profitability and capital-to-assets ratios will decline as the financial stability of a failing institution worsens. Studies that trace the deterioration of these variables do not reveal the causes of failures but merely the probability that an institution will fail. However, examination of symptomatic variables is not meaningless as these variables may provide criteria to assist regulators in determining when an institution requires closer supervision; in other words, in devising early warning systems. If a system of risk-related deposit insurance were ever adopted, these variables would also assist regulators in establishing premium benchmarks.

Credit risk is the risk that loans or other assets will default or perform poorly. Interest rate risk reflects the sensitivity of a financial institution's earnings because of a mismatched maturity structure for its assets and liabilities. Moral hazard risk accounts for the possibility of failure because of fraud, embezzlement or other insider malfeasance. Diversification risk arises from concentration of assets and liabilities in specific product lines, industries, locations or related groups of individuals or companies. Liquidity risk accounts for the possibility that sudden demands for cash withdrawals may lead to insolvency if the institution has insufficient liquid assets to meet those demands. Operational inefficiency reflects the fact that institutions with abnormally high non-interest costs are more susceptible to failure if other problems arise. Rapid loan portfolio growth, unless properly administered and controlled, may lead to excessive loan concentration, poor quality credits, inexperienced lending officers, poor loan documentation, malfeasance by loan officers, and increased dependence on brokered deposits. Exogenous factors are environmental elements over which financial institutions have little or no

control and which cannot be categorized as macroeconomic. The exogenous factors referred to in this summary are changes in the regulation of U.S. financial institutions which have affected their operation and performance.

As a caveat, we point out that the approach of this summary (and the underlying research studies) is necessarily one of discussing each variable and variable category separately. However, these variables are not discrete; they are often interdependent. For example, insider malfeasance may not only reflect moral hazard risk but may eventually manifest itself as credit risk if insider loans go sour. Unfortunately, empirical studies have not been able to separate these interdependencies.

C. Macroeconomic Factors[31]

There is a relationship between general economic conditions and bank failure rates. In the early stages of a recession, businesses increasingly turn to banks for inventory financing. As the recession becomes more protracted, increasing numbers of borrowers are forced to default, resulting in lower bank profits and higher bank failure rates. This suggests that there may be a considerable time lag between the onset of the recession and increased failure rates.

The macroeconomic performance variables which may be related to the rate of bank failures are those which directly or indirectly reflect the ability of businesses and individuals to meet debt obligations under changing economic circumstances. Real GNP growth, unemployment rates, real interest rates and corporate debt burden were examined in one U.S. study for the years from 1970 to 1984 to determine whether there is a relationship between these variables and bank failure rates, and if there was, to determine the time lag associated with each variable.

Real GNP growth exhibits the weakest relationship to bank failures and could only account, after roughly a five quarter lag, for about 10 percent of the variation in bank failure rates over the period studied.

The unemployment rate exhibited a more consistent relationship to bank failures than real GNP growth. Unemployment rates tended to lead failure rates by about one

to three quarters, and accounted for 56 percent of the total variation in bank failures over the past 14 years.

The level of real interest rates (as measured by the differences between the bank rate on short term loans and the overall rate of inflation) has increased debt burdens considerably above historic levels both during and following the recent recession. Of the total variation in bank failures over the period studied, just over 50 percent was accounted for by the level of real interest rates, after a five quarter lag.

Corporate debt burden (essentially the ratio of corporate debt burden to cash flow) exhibited the closest statistical fit with bank failures over time. Increases in the corporate debt burden generally led increases in failure rates by roughly five quarters and accounted for about 62 percent of the variation in bank failures over the period studied.

While changes in macroeconomic conditions seem to have played a large role in the higher failure rate of recent years, the study concluded that they explain only a part of the increase in bank failures. This conclusion led to the examination both by this study and by other studies of various microeconomic variables.

D. Microeconomic Factors

(a) Symptomatic Variables

As noted above, certain factors examined in recent U.S. studies did not point to the causes of failure *per se*, but rather were factors which were found to be symptomatic of bank failure. These variables may be useful (in combination with other factors discussed in this summary) in formulating econometric models to assist regulators in creating early warning systems which identify problem financial institutions for special attention and perhaps in establishing risk-related deposit insurance premiums.

(i) Banks

It is not surprising that an examination of a profitability ratio by one U.S. study found that failed banks tend to be unprofitable in their last years of

operation.[32] In 1982, 73 percent of failed banks had returns on assets ("ROAs") that ranked in the lowest quartile for all banks in their size class in the year prior to failure and nearly 60 percent had relatively low ROA's for both the second and third years prior. Though it is a logical expectation that failed banks would have lower profitability just before failure, 10 percent of the failed banks actually had good performance results right up to their last year of operation.

The results in respect of the relationship between capital adequacy and bank failures are not consistent. Studies using data on failures which occurred primarily during the 1930's have concluded that there are no significant differences between the capital ratios of failed and healthy banks.[33]

However, some recent studies have challenged this view. One study, which examined failures of national banks during 1982, 1983 and the first three quarters of 1984, concluded that, on average, failed banks have lower capital ratios prior to failure than do their surviving counterparts.[34] A second study, which examined bank failures occurring in essentially the same period, found that failed banks were more likely to have low equity to assets ratios and that this factor became more apparent in the last year of operation.[35] Finally, a study which focussed on bank failures occurring in 1964, 1975 and 1982-83 indicated that the capital to assets ratio was not a significant variable for bank failures in 1964 and 1975, but was significant for the 1982-83 period.[36]

(ii) Thrift Institutions

A study examining the failure of thrift institutions found that failed thrift institutions also demonstrated low ROAs in the years prior to failure when compared to non-failed institutions for the years 1981-1984.[37]

The same study found that capital adequacy, as measured by the ratio of net worth to total assets, was very low in the year prior to failure for failed thrift institutions between 1981 and 1984 and all of the failed thrifts had net worth figures which were significantly below average.[38] Another study shows that as net worth increases, the probability of failure declines significantly.[39] This

finding is consistent with the heavy regulatory emphasis placed on net worth levels by U.S. regulators of thrift institutions.

(b) Credit Risk

Credit risk attempts to measure the threat of erosion of net worth and profitability arising from loan losses through default. We have also included in this category factors which affect the overall risk level of the institution's asset portfolio (see also Diversification Risk below), as they pose a similar threat to an institution's net worth and profitability.

(i) Banks

One study examining bank failures in 1982 found that failed banks displayed poor performance in terms of loan losses and had high loans to assets ratios prior to failure which increased in their final year of operation. However, that same study found that each of the ratios of commercial loans to total loans, real estate loans to total loans and consumer loans to total loans in the three years prior to failure was not, by itself, a significant determinant of 1982 failures.[40] Another study found that the loans to assets ratio was a significant determinant of the variation of failures for the years 1964, 1975 and 1982-83, i.e., banks with a larger share of loans in their asset portfolios were more likely to fail.[41]

Differences in the ratios of U.S. Treasury securities (which would be expected to reduce the overall risk level of the asset portfolio) to assets, however, were found to be insignificant in each of the periods 1964, 1975 and 1982-83. However, managers have demonstrated a willingness to take on more risk in recent years and this has contributed to the recent increase in bank failure rates. Time series data indicate that over the period from 1963 to 1983 banks have altered their asset portfolios away from U.S. Treasury securities into loans and other securities which are less liquid and which are subject to some degree of default risk. For example, the proportion of assets held in U.S. Treasury securities declined from 29 percent in 1963 to 13.4 percent in 1984, while the comparable percentages for loans were 44 percent in 1963 and 51 percent in 1984.[42]

In this regard, it is interesting to note that interest rate margins have not decreased significantly in the face of interest rate deregulation in the United States. This suggests that banks may have found it necessary to invest in riskier, higher return assets to keep interest margins up, thus increasing the likelihood of failure.[43]

Finally, financial safety-nets (such as deposit insurance and the existence of a lender of last resort) have created an incentive for risk-taking resulting in greater systemic risk.[44] Depositors of insured institutions have little incentive to evaluate the riskiness of the various deposit-taking institutions. Consequently, the management of such institutions has less incentive to monitor diligently the risk level of the institution's asset portfolios. In contrast, managers of uninsured institutions theoretically would be induced by market forces to pay close attention to the risk posed by their chosen investments. Thus, insured institutions can issue virtually risk-free liabilities even if they invest in very risky assets. The risk, however, is not eliminated but is shifted to those who underwrite deposit insurance (ultimately low-risk institutions and possibly taxpayers). Therefore, as long as depositors are insured (or act as if they are insured) there is no internalization by the market of the economic risks posed by the insured institution.[45]

(ii) Thrift Institutions

The studies examining the causes of thrift institution failures agree that the primary cause of a large number of recent failures was a maturity mismatch between assets and liabilities.[46] Thrift institutions in particular felt the drastic increase in interest rates in the late 1970's and early 1980's because they were forced to pay higher interest rates on deposits, while being saddled with long-term low-yielding mortgages as their principal source of income. To alleviate this problem, thrift institutions were given broader investment powers, including the power to make certain direct investments, such as ownership of land held for development, housing projects and service corporations. The studies disagree on the extent to which asset quality and this new power to make direct investments have contributed to failures.

The loan quality of the asset portfolios of thrifts reflects the level of managerial risk-taking. The

studies examine various factors believed to represent proxies of these risk levels. For instance, one study by George Benston examined the difference in the level of foreclosed real property between failed and surviving thrifts and found that the difference was not very great.[47] Similarly, non-mortgage consumer loans and non-mortgage other loans formed such a relatively small proportion of total assets of thrifts that Benston concluded that these loans were not related to the failure of thrifts.[48] While these results suggest that asset quality is not a signficant factor in explaining the failure of thrifts, another study found that, beginning in 1983, thrifts became increasingly hampered by poor quality assets and considered credit risk as the major threat to thrift institutions. That study mentioned that FSLIC considered two-thirds of its current problem thrifts to be primarily asset-quality problems.[49] Unfortunately, this second study and the FSLIC data do not indicate which types of assets are causing solvency problems and therefore, we are unable to determine to what extent these findings conflict with those of Benston.

The results of these two studies respecting the effects of expanded direct investment are clearly contradictory. Benston concluded that direct investments were not a significant cause of thrift failures. In support of this conclusion, he noted that 65.9 percent of failed institutions had less than one percent of their total assets in direct investments, that 93.3 percent had less than five percent of assets in direct investments and that only 1.8 percent had direct investments above the 10 percent level considered unsafe by FSLIC.[50] In fact, for nine of 11 thrifts with direct investments greater than five percent of assets, those direct investments returned net income until the point of failure.[51]

On the other hand, the other study observed that nonfailed institutions hold significantly less direct investment, and, more specifically, invest less in service corporations, than do failed institutions.[52]

Consequently, in view of the apparent conflicts, it is not possible to draw any conclusions in respect of the degree to which credit risk, particularly the increase in direct invesments by thrift institutions, has affected the failure rate of thrift institutions.

(c) Interest Rate Risk

The earnings of financial institutions are sensitive to interest rate changes whenever the maturity structures of assets and liabilities are mismatched. If interest rates suddenly increase, institutions funding longer term assets with shorter term deposits run the risk of failure as the cost of funds may come to exceed the return on assets.

(i) Banks

One variable used to determine the exposure of a financial institution to interest rate risk is the ratio of purchased funds to liabilities. "Purchased funds" is a term similar to what are often described in Canada as wholesale deposits and was defined in one study as deposits in excess of $100,000, funds borrowed from other banks in the federal funds market, securities sold under agreements to repurchase and borrowing from the Federal Reserve Bank. One study found this ratio was an important determinant in the variance of bank failures. In addition, time series data for the period 1963 to 1983 identified a shift from "core deposits" (relatively stable and low-cost sources of funds such as demand deposits and passbook savings accounts) as a source of funding into purchased funds over this period as reflective of an increase in exposure to interest rate risk.[53]

(ii) Thrift Institutions

As previously mentioned, the data compiled on thrift institution failures strongly support the hypothesis that a primary cause of those failures, particularly around 1982, was a rising interest rate scenario combined with mismatched asset and liability portfolios dominated by fixed interest mortgages and interest-sensitive liabilities.[54] Non-failed thrifts were shown to have chosen asset portfolios less influenced by interest rate risk.[55]

(d) Moral Hazard Risk

Moral hazard risk measures the extent to which failures of financial institutions are caused by fraud, embezzlement and insider malfeasance. It is not always clear whether insider malfeasance is the cause of failure or merely a symptom. For example, insider malfeasance may be the result of a "take the money and run" philosophy as directors and officers try to get maximum personal return

before the failure of an institution or it may reflect a failed gamble that tried to save a financial institution from a bad situation. Moreover, data on that misconduct do not indicate whether a bank failed solely because of insider misconduct. For example, malfeasance, low performance and credit risk may be related because those engaged in insider misconduct may also lower bank profitability as they make unsound loans to themselves or friends or raise operating expenses by improving salaries, fringe benefits and other employment perquisites.[56]

To some extent, the impact of fraud on failure will always be subject to dispute. A poor quality loan made to a person specified by a bank officer can either be viewed as a poor quality loan or, if the officer receives some form of compensation from the borrower, insider misconduct. Proof of misconduct will be difficult to establish if the compensation is indirect. Thus, it may be easier to classify a bank failure as resulting from poor loan quality rather than insider misconduct. In their article on bank failures, Peterson and Scott present figures which show the interrelationship of various factors, including insider misconduct, as causes of insolvencies.[57]

Data compiled by the House Subcommittee on Commerce, Consumer and Monetary Affairs on investigations, indictments, guilty pleas and convictions associated with recent bank failures indicate that in 61 percent of bank failures, there was actual or probable misconduct by officers, directors and other insiders.[58] If anything, the 61 percent figure should be regarded as conservative because the House Subcommittee only counted half the pending cases in which the U.S. Justice Department considered criminal indictments "probable or possible" as misconduct causes. If all had been considered to be misconduct cases, the resulting statistic would be 69 percent, not 61 percent.[59]

(e) Diversification Risk

Diversification risk measures the extent to which financial institutions have a greater risk of failure because of concentration of assets and liabilities in specific product lines, industries, locations or with related groups of individuals or companies. Diversification risk is interrelated with credit and liquidity risk because asset concentrations increase credit risk while liability concentrations increase liquidity risk. Another aspect of

diversification risk concerns the range of activities in which financial institutions are allowed to engage.

(i) Regional and Industrial Factors

The 1982-83 recession and subsequent recovery of the U.S. economy have been uneven, with some industries and regions lagging considerably behind overall economic recovery.[60] Several factors may be responsible for this. The high value of the U.S. dollar relative to other currencies has significantly hurt export trade and, in turn, those industries which rely heavily on it, for example, agriculture. Moreover, there has been increased foreign competition against American labour-intensive industries, where lower labour costs give foreign firms a distinct advantage. Other industrial problems are related to a decline in demand for the products of certain sectors of the economy. Steel and energy are good examples of this, where a softening of world demand has resulted in chronic problems for several segments of these industries. Geographic regions which rely heavily on these troubled industries are, in turn, facing problems which are not characteristic of past recession and recovery phases.[61]

Since January, 1982, seven states with 31 percent of U.S. commercial banks have accounted for 63 percent of commercial bank failures (Tennessee, Texas, Illinois, California, Oklahoma, Oregon, Arkansas).[62] These failures have also been associated with specific industrial problems, namely, energy, forest products, real estate and agriculture.

(ii) Activity Diversification

Deregulation and greater competition from financial conglomerates has brought the issue of potential bank participation in a wider range of product markets to the forefront in the United States. The debate currently focusses on whether greater bank participation in insurance, real estate and securities markets would increase or decrease the overall risk levels of banks.

A recent note in the Harvard Law Review argued that activity deregulation, instead of increasing the riskiness of banks, might actually reduce riskiness.[63] The article applied the lessons of financial theory's Capital Assets Pricing Model ("CAPM") to illustrate this

possibility. The CAPM postulates that there are two types of risk, "systematic risk" and "unique risk". Unique risks are risks which are peculiar to a given industry and can be reduced and even eliminated by diversification into other industries. Systematic risk cannot be eliminated by diversification. Diversification by a bank into other industries will reduce unique risk. However, systematic risk may increase if the diversification is made into other industries whose profitability is correlated positively with banking.

Currently in the U.S., banks are only allowed to engage in activities that are "closely related" to banking. The more closely a non-banking activity is related to banking, the more likely its profitability will be correlated positively with that of banking. The Harvard Law Review note argues that banks should be deregulated and allowed to engage or invest in activities which are not related to banking because such diversification will not only reduce unique risk, but have a greater chance of reducing systematic risk. While reaching that conclusion, the article unfortunately does not discuss any contentious issues related to product expansion such as conflicts of interest which may arise.

(f) Liquidity Risk

Liquidity risk indicates the degree to which a financial institution can meet unanticipated short run withdrawals. The ratios which were most often used in the studies to measure liquidity are (1) core deposits to liabilities, (2) purchased funds to liabilities and (3) liquid assets to total assets. However, it is difficult to compare the results of the various studies because they often draw conflicting conclusions from data utilizing many different financial ratios.

The ratio of core deposits to liabilities measures the availability of a relatively stable, low-cost source of funds. "Core deposits" are defined as demand deposits plus passbook savings deposits. Purchased funds to liabilities serves as a proxy for the amount of more volatile interest-sensitive funds held as deposits. The ratio of liquid assets to total assets is a general measure of the liquidity of a financial institution's assets, providing an estimate of the institution's ability to meet a deposit run.

(i) Banks

One study found that the ratios of core deposits to liabilities and purchased funds to liabilities were important determinants in the variance of bank failures.[64] Non-failed banks had a significantly larger proportion of stable, low-cost core deposits and thereby were less exposed to pressures from rising borrowing costs and deposit outflows. In contrast, another study examining bank failures in 1982 found that while failed banks had relatively high ratios of time deposits to total liabilities and equities at the end of the last year prior to failure, the difference was not statistically significant either in that year or in the two years prior to failure. Moreover, the ratio of cash and cash equivalents to total assets in the three years prior to failure were found to be insignificantly related to failure.[65]

(ii) Thrift Institutions

The results from studies examining the failure of thrift institutions were similarly inconclusive. One study found that the ratio of liquid assets to total assets was not statistically significant,[66] whereas another study found that failed institutions had a greater amount of large liabilities (essentially purchased funds) to total assets.[67]

(g) Operational Inefficiency

Although operational inefficiency may not in itself cause failures, financial institutions with abnormally high non-interest costs are more likely to fail in the event that other problems arise. The only study which examined this potential cause of failure involved the study of bank failures in 1982, 1983 and the first quarter of 1984. It found that failed banks were more likely to have low operating efficiency, deteriorating in the last year of operation as evidenced by high overhead expenses to assets ratios.[68]

(h) Rapid Growth

Although it might be expected, as mentioned earlier, that all failed banks would have low performance statistics prior to failure, approximately 10 percent of the banks failing in 1982 had generally good performance statistics until there was a sudden failure.[69] One

characteristic of these failures, however, was that many of these banks failed after a period of very rapid growth. This leads to the suspicion that these failed institutions were not healthy until sudden failure, but instead that the financial disclosure for these institutions may not have reflected their true state of financial health.

Certain indices of rapid growth were examined to determine which, if any, appeared to be correlated with bank failures. While total asset growth was highly correlated with problem banks in a study examining bank failures in 1982, 1983 and the first quarter of 1984, the single most important growth measure associated with bank failures was the growth rate in time and savings deposits - which grew by 20 percent or more in the last year of operation for one-third of the failing banks - possibly because problem banks had to expand their use of purchased money to fund their growth.[70] Another strong indicator of possible problems was growth in "other liabilities", which, two years prior to failure, grew by 20 percent or more for 45 of 66 banks for which adequate data were available.[71]

A final characteristic of several high growth banks which eventually failed is rapid loan growth. The failures of Penn Square, Abilene National, First of Midland, and, more recently, the "run" on Continental Illinois are all widely publicized cases where seemingly solid banks with sustained loan growth in excess of 20 percent per year encountered severe solvency problems.

Rapid loan portfolio growth is often identified as a contributing factor to the difficulties of problem institutions because it is hard to manage such growth in a profitable manner. In order to carry a rapid growth policy into effect, a financial institution requires experienced loan officers and credit analysts. The financial institution must also impose tight administrative control systems designed to ensure that (1) new loans are high quality loans and not the rejects of other financial institutions, (2) adequate loan documentation is developed and maintained, (3) no cross-dealing occurs between bank officials and new customers, and (4) that management is rewarded for growth in quality loans rather than growth in volume. Management must also monitor the extent to which new loan risks are diversified among industries and geographic regions. In all cases where major bank problems have resulted from rapid loan growth, the press has reported

one or more of the problems noted above, i.e., insufficient diversification, poor loan quality, inexperienced lending officers, poor loan documentation or misconduct of loan officers.[72]

(i) Exogenous Factors

Certain of the factors examined in the studies involved pressures arising from external changes which were imposed upon financial institutions; that is, they did not arise from matters which were generally within the decision-making powers of financial institution managers. The factors discussed include changes in chartering restrictions, interest rate deregulation and product expansion.

The recent increase in the bank failure rate is at least partially explained by the relaxation of chartering restrictions which has resulted in an increase in the number of commercial banks. For example, in the 1960's, new commercial banks averaged 172 per annum, whereas the 1970's and 1980's saw the addition of 239 and 366 new banks per annum respectively. As is generally the case with non-financial institutions, newer banks tend to have higher failure rates than established banks. At year end 1983, 10 percent of U.S. banks were less than three years old, while 17.5 percent of the banks that failed between January 1, 1982 and September 1, 1984 were less than three years old.[73]

The impact of interest rate deregulation is more difficult to evaluate. Interest rates payable on deposit instruments used to be subject to tight maximums under Regulation Q. Deregulation witnessed the removal of Regulation Q. While the lifting of interest rate restrictions does not seem to have significantly lowered interest rate margins, this does not mean that it has had no effect on failure rates. With interest rate deregulation, banks may have found it necessary to invest in riskier, higher return assets in order to maintain interest margins. Discussion earlier in this paper showing an increase in the riskiness of bank investments seems to support this hypothesis.[73]

Moreover, since insured depositors do not need to evaluate the riskiness of alternative deposit-taking institutions, high risk banks, with the help of interest rate deregulation, now have the opportunity to attract large

amounts of funds by paying highly attractive rates of interest to expand their scope of operations.[75] Thus, interest rate deregulation is a factor which has contributed to the rapid growth of some financial institutions. Discussion earlier in the paper has illustrated how rapid growth has helped increase the failure rate of financial institutions.

V. CONCLUSIONS

After reviewing the rationales which justify the special regulation of financial institutions to ensure liquidity and soundness, this paper examines the causes of insolvencies of Canadian and U.S. deposit-taking institutions. Definitive conclusions, particularly with respect to Canadian institutions, are difficult for two reasons. First, the data available on Canadian insolvencies pale in comparison to that available on U.S. insolvencies. Second, the various causes are interrelated and no empirical method exists to determine precisely the effect of a single cause.

Certain causes were recurrent in both the United States and Canada. For example, there was a severe macroeconomic fallout from the 1981-82 downturn in the North American economy which strained the balance sheets of real goods companies and hence, financial institutions. For example, the level of real interest rates, which recently increased debt burdens above historic levels, exhibited a close relationship to the number of U.S. failures. While the economic downturn played a role in the failure of many financial institutions, several microeconomic factors were also significant.

Significant microeconomic factors contributing to the failure of both Canadian and U.S. deposit-taking institutions were inadequate diversification, mismatched assets and liabilities, self-dealing abuses, excessive risk-taking and managerial weakness. Inadequate diversification manifested itself through excessive concentrations of assets in related industries and product lines or in a particular region. Often these concentrations overlapped. For example, financial institutions who concentrated their assets in western Canada tended to be concentrated in problem sectors of the economy such as the oil and gas industry and/or commercial real estate. Similar considerations were found to operate in the U.S. Both in Canada and the U.S., failures were more prevalent for institutions whose assets were concentrated in regions where recovery from the 1981-82 economic downturn has been slow.

Mismatched assets and liabilities have been identified as the major cause of failures of savings and loan associations in the United States. While the burden of this problem was not so significant in Canada, it did play a role in a small number of failures. Mismatching problems in both the U.S. and Canada may be a symptom of the reliance by many institutions on rate-sensitive wholesale deposits. If so, the mismatching may be regarded as another form of inadequate diversification, on the deposit (not asset) side of the balance sheet.

Self-dealing abuses apparently have been evident in the majority of failures of U.S. and Canadian deposit-taking institutions. However, caution should be exercised before self-dealing is characterized as a primary cause of insolvency because it may only be symptomatic as insiders of a failing institution either try to extract whatever they can before failure or desperately self-deal in an attempt to avoid insolvency.

Excessive risk-taking results from the highly levered nature of financial institutions' balance sheets, especially when deposit insurance and a history of government bail-outs have reduced the incentive for depositors to monitor the riskiness of a financial institution's assets. The problem of excessive risk-taking may have been compounded further in the United States in the mid-1980's with the elimination of interest rate ceilings on deposits. Having to pay higher rates on deposits, U.S. institutions are assuming greater risk by altering their asset portfolios away from safe investments such as government securities into loans and other securities which are less liquid and are subject to risk default in order to preserve interest rate spreads.

Managerial weakness is a broad category which may manifest itself in several forms, including inefficient operations, overconcentration of loans in a few sectors, excessive risk-taking, improper lending procedures, overreliance on wholesale deposits and rapid uncontrolled growth. In this sense, managerial weakness has been a factor in a great number of recent insolvencies.

While the U.S. data reviewed in this paper dealt exclusively with deposit-taking institutions, our Canadian discussion includes an analysis of the recent failure of six property and casualty insurers. Several causes explain their failure, including higher than expected claims, stiff

premium rate competition, inadequate capital and surplus, inadequate reserves for claims, poor quality of underwritten business, denial of liability by reinsurers, and mismatched assets and liabilities.

In preparing this paper, we have been constrained by the lack of data which exists in Canada. The U.S. data, at least with respect to deposit-taking institutions, is much richer. While there are significant regulatory differences between Canada and the United States which may justify caution in applying the specific findings of the U.S. literature to the Canadian milieu, certain of the results, such as those respecting diversification, self-dealing and rapid growth, are more universal in nature and may be readily applied to the Canadian situation. To this extent, this paper may prove useful to managers and regulators of Canadian financial institutions. In addition, our analysis of Canadian insolvencies, while somewhat limited by data constraints, may in conjunction with our review of the U.S. literature, provide a base for further studies and data accumulation.

NOTES

1. This problem was recently addressed at the Conference on the Changing Regulatory Environment for Canadian Financial Institutions, University of Toronto Faculty of Law and Ontario Economic Council, 22-23 May 1985 by Mr. Robert Clark, Professor, Harvard Law School and Mr. Dick Humphrys, former Superintendent of Insurance, Department of Insurance, Department of Finance, Ottawa. In their discussion, both parties agreed that a precise definition of solvency for financial institutions was illusory.

2. This distinction between the justification for special solvency regulation of financial institutions and the explanation of its existence has been borrowed from R. Clark, "The Soundness of Financial Intermediaries" 86 Yale L. J. 1. The authors acknowledge an extensive debt to this seminal article by Professor Clark in our discussion of the rationale for regulation. Our discussion differs from that of Professor Clark in one respect: we restrict our discussion to an explication of why special solvency regulation is necessary for financial institutions. Once establishing that need, we reserve judgment on the efficacy of current regulation. Professor Clark, in his article, takes that extra step and engages in a normative analysis of the form regulation should take, criticizing current regulation where it is excessive, inadequate or misdirected.

3. Clark, supra, note 2 at p.13.

4. Interim Report of the Ontario Task Force on Financial Institutions (Toronto: December 1984), p.13.

5. J. Pesando, "Government Responses to the Regulatory Challenge: The Interim Report of the Ontario Task Force and the Federal Green Paper", paper presented at the Conference on the Changing Regulatory Environment for Canadian Financial Institutions, Toronto, 22-23 May 1985, p.1.

6. Department of Finance, The Regulation of Canadian Financial Institutions: Proposals for Discussion, (Ottawa: April 1985) (hereinafter cited as Green Paper), p.11.

7. Canada, Hansard (Commons) Standing Committee on Finance, Trade and Economic Affairs, Minutes of Proceedings and Evidence Respecting Document Entitled The Regulation of Canadian Financial Institutions: Proposals for Discussion. First Session of 33rd Parliament, 1984-5 (Ottawa: Queen's Printer, 1985) (hereinafter cited as Proceedings of Standing Committee in Respect of Green Paper), p.47:56.

8. Blueprint for Reform: The Report of the Task Group on Regulation of Financial Services, CCH Fed. Sec. L. Rep. No.1099 (November 14, 1984: Part II) p.34.

9. Much of the leading work in the study of failed and problem bank rates in the U.S. has been undertaken by the Division of Research and Strategic Planning of the Federal Deposit Insurance Corporation and is published in the monthly publication of that Division entitled Economic Outlook. It does not appear that the Canada Deposit Insurance Corporation maintains any comparable research capability.

10. See, for example, papers presented to the Conference on the Changing Regulatory Environment for Canadian Financial Institutions, Toronto, 22-23 May 1985.

11. See, for example, Green Paper, p.11 (11 trust and mortgage loan companies; four property and casualty insurance companies); D. Blenkarn, Proceedings of Standing Committee in Respect of Green Paper, p. 48:22 (13 trust company "bailouts" since 1983; 5 insurance company failures); D. Slater, Submission to the Standing Committee on Finance, Trade and Economic Affairs (Ottawa: September 1985), p.9 (28 failures since 1980).

12. Slater, supra, note 11 at p.8.

13. G. Bouey, Proceedings of Standing Committee in Respect of Green Paper, p..47:84.

14. R. M. Hammond, Proceedings of Standing Committee in Respect of Green Paper, p.43:35.

15. Ibid., at p.43:8.

16. Ibid., at p.43:9

17. J. Pesando, Proceedings of Standing Committee in Respect of Green Paper, p.45:22.

18. Ontario Task Force on Financial Institutions, Public Hearings, Vol.V, 5 June 1985, p.946 (testimony of Professor Seymour Friedland) (hereinafter cited as Public Hearings).

19. Pesando, supra, note 17 at pp. 45:21-2.

20. Ibid., at p.45:22.

21. Hammond, supra, note 14 at p.42:20.

22. Ibid.

23. Slater, supra, note 11 at p.9.

24. Bouey, supra, note 13 at p.47:84.

25. See, for example, G. Benston, Proceedings of Standing Committee in Respect of Green Paper, p.49:75.

26. For a discussion of the problems associated with the management of rapid portfolio growth see Public Hearings, Vol. V., 5 June 1985, p.969 (testimony of Professor Seymour Friedland).

27. Canada, Hansard, (Commons) Standing Committee of Finance, Trade and Economic Affairs, Report on the Canadian Commercial Bank, First Session of 33rd Parliament, 1984-5 (Ottawa: Queen's Printer, 1985) p. 41:16.

28. Public Hearings, Vol. VI, 10 June 1985, p.1043 (testimony of Mr. Ron Griffiths, Insurance Brokers Association of Ontario).

29. J. Bovenzi and L. Nejezchleb, "Bank Failures: Why Are There So Many?", Issues in Bank Regulation, Winter 1985, p.54. When a bank is examined by federal or state regulators, it receives a rating according to the Uniform Interagency Bank Rating System (known as CAMEL) of 1 (good) to 5 (bad) for each of five areas - capital, assets, management, earnings and liquidity - as well as a composite rating reflecting the examiner's overall assessment. Banks given a composite rating of 4 or 5 are part of FDIC's problem bank list.

30. J. Barth, R. Brumbaugh, Jr., D. Sauerhaft, and G. Wang, "Thrift-Institution Failures: Causes and Policy Issues", paper presented at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1-3 May 1985, p.1.

31. Bovenzi and Nejezchleb, supra, note 29 at pp.55-58.

32. W. Scott, T. Koch, R. Peterson and P. Rose, A Strategic and Financial Analysis of Community Banking, Dun and Bradstreet Credit Services, Dun and Bradstreet Inc., New York, N.Y. 1984 as cited in R. Peterson and W. Scott, "Major Causes of Bank Failures", paper presented at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1-3 May 1985, pp.2-3. See also Table 3 of Peterson and Scott at pp.14-15.

33. See R. Cotter, "Capital Ratios and Capital Adequacy, "The National Banking Review" (March 1966) pp.333-346 and H. Secrist, National Bank Failures and Non-Failures (Bloomington, Indiana: The Principia Press, 1938) pp.18-19 as cited in J. Marino, "Comparison of Failed and Healthy Bank Capital Ratios", Economic Outlook, Vol.2:11, Federal Deposit Insurance Corporation, November 1984, p.2.

34. Marino, supra, note 33 at p.4.

35. Petersen and Scott, supra, note 32 at pp.6, 10.

36. E. Short, G. O'Driscoll, Jr. and F. Berger, "Recent Bank Failures: Determinants and Consequences", paper presented at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1-3 May 1985, p.9.

37. G. Benston, "Savings and Loan Association Failures: An Analysis of Proximate Causes", paper presented at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1-3 May 1985, p.12.

38. Ibid., pp.11-12.

39. Barth et al., supra, note 30 at p.16.

40. Scott, Koch, Peterson and Rose, supra, note 32 as cited in Peterson and Scott, supra, note 32 at p.3.

41. Short, O'Driscoll, Jr., and Berger, supra, note 36 at pp.6, 13.

42. Ibid., p.8.

43. Bovenzi and Nejezchleb, supra, note 29 at p.67.

44. Short et al., supra, note 36 at p.9. See also, G. O'Driscoll, Jr. and E. Short, "Safety-Net Mechanisms: The Case of International Lending", 4 Cato Journal (1984) p.185-204.

45. This argument has been made forcibly, in a Canadian context, by Professor James Pesando of the University of Toronto in the preliminary version of a paper provided to the Ontario Task Force on Financial Institutions. See, J. Pesando, "Deposit Insurance and the Incentive for Excessive Risk-Taking: Alternative Strategies for Reform" (July 1985).

46. Benston, supra, note 37 at p.19; Barth, Brumbaugh, Jr., Sauerhaft and Wang, "Insolvency and Risk-Taking in the Thrift Industry: Implications for the Future", a paper presented at the Annual Conference of the Western Economic Association 30 June - 4 July 1985, p.9.

47. Benston, supra, note 37 at p.15.

48. Ibid.

49. Barth et al., supra, note 30 at pp.2-5.

50. Benston, supra, note 37 at p.17.

51. Ibid., Table 3.

52. Barth et al., supra, note 30 at p.14.

53. Short et al., supra, note 36 at p.7.

54. Benston, supra, note 37 at p.19.

55. Barth et al., supra, note 30 at p.14.

56. Peterson and Scott, supra, note 32 at p.4.

57. Ibid., Figures 1 and 2, pp.17, 18.

58. J. Pate, "Statistics on the Federal Response to Criminal Conduct by Bank Officers, Directors and Insiders: A. Staff Analysis", Subcommittee on Commerce, Consumer and Monetary Affairs, May 2, 1984.

59. Peterson and Scott, supra, note 32 at p.4.

60. Bovenzi and Nejezchleb, supra, note 29 at p.58.

61. Ibid.

62. Ibid., pp.59-62.

63. "The Demise of the Bank/Non-Bank Distinction: An Argument for Deregulating the Activities of Bank Holding Companies," 98 Harvard L. Rev. 650 (1985).

64. Short et al., supra, note 36 at p.7.

65. Peterson and Scott, supra, note 32 at p.3.

66. Barth et al., supra, note 30 at p.16.

67. Benston, supra, note 37 at p.13.

68. Peterson and Scott, supra, note 32 at p.6.

69. Ibid., pp.2-3.

70. Ibid., p.7.

71. Ibid.

72. Ibid., pp.7-8.

73. Bovenzi and Nejezchleb, supra, note 29 at pp.64-65.

74. Ibid., pp.66-67.

75. Ibid., p.67.

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